William L. Ellsworth, Professor (Research) of Geophysics July 14, 2020

William L. Ellsworth is a professor in the Department of Geophysics at Stanford University His research focuses on the seismological study of active faults, the earthquakes they generate and the physics of the earthquake source. A major objective of his work is to improve our knowledge of earthquake hazards through the application of physics-based understanding of the underlying processes, and the transfer of scientific understanding of the hazard to people, businesses, policymakers and government agencies. As Co-Director of the Stanford Center for Induced and Triggered Seismicity (SCITS) he leads multi-disciplinary studies into the causes and consequences of anthropogenic earthquakes in a wide variety of settings. Before coming to Stanford in 2015 he spent over 40 years as a research geophysicist at the U.S. Geological Survey where he served as Chief of the Branch of Seismology and Chief Scientist of the Earthquake Hazards Team. He received B.S. in Physics and M.S. in Geophysics from Stanford University and his Ph.D. in Geophysics from MIT. He is a past President of the Seismological Society of America, a Fellow of the American Geophysical Union, and recipient of the Distinguished Service Award of the Department of the Interior.

Education

1978 | Ph.D. in Geophysics, Massachusetts Institute of Technology.
1971 | M.S. in Geophysics, Stanford University.
1971 | B.S. in Physics, Stanford University.

Professional Experience

2015 – Present | Professor (Research) of Geophysics, Stanford University.
2015 – Present | Co-Director, Stanford Center for Induced and Triggered Seismicity
1971-2015 | Geophysicist, U. S. Geological Survey.
2002-2005 | Chief Scientist, Earthquake Hazards Team, U. S. Geological Survey.
1982-1988 | Chief, Branch of Seismology, U. S. Geological Survey.

Honors and Awards

- 2019 | Pangea Lecturer, University of Alberta
- 2018 | Gutenberg Lecturer, American Geophysical Union
- 2016 | Best Recent Publication, Petroleum Structure and Geomechanics Division, American Association of Petroleum Geologists
- 2012 | EarthScope National Lecturer
- 2010 | Distinguished Service Award, U. S. Department of the Interior
- 2007 | Elected President, Seismological Society of America.
- 2001 | Elected Fellow of the American Geophysical Union
- 1993 | Gilbert Fellow, U. S. Geological Survey
- 1990 | Meritorious Service Award, U. S. Geological Survey

University Service

- Current | Pre-major Advisor for Freshmen and Sophomores
- Current | Principal thesis advisor for three students and working with many others on either their main thesis topic or second project
- Current | Postdoctoral Advisor for four scholars
- Current | Chair, Department of Geophysics Admissions Committee
- Current | Department of Geophysics Reappointment Committee
- 2018 | Pre-major Advisor for Freshmen and Sophomores
- 2018 | Principal thesis advisor for three students and working with many others on either their main thesis topic or second project
- 2018 | Postdoctoral advisor for two scholars
- 2018 | Department of Geophysics Admissions Committee

- 2018 | Department of Geophysics Reappointment Committee
- 2017 | Pre-major Advisor for Freshmen and Sophomores
- 2017 | Postdoctoral Advisor for two scholars
- 2017 | Principal thesis advisor for two students and working with many others on either their main thesis topic or second project
- 2017 | Stanford Earth Young Investigators mentor
- 2017 | Geophysics 385L, Earthquake Seismology, Deformation, and Stress
- 2017 | Department of Geophysics Admissions Committee
- 2017 | Department of Geophysics Reappointment Committee
- 2016 | Pre-major Advisor for Freshmen and Sophomores
- 2016 | Postdoctoral Advisor for one scholar
- 2016 | Department of Geophysics Admissions Committee
- 2016 | Department of Geophysics Reappointment Committee

Professional Activities since 2015

- Current | Co-Director, Stanford Center for Induced and Triggered Seismicity
- Current | Chair, Earthquake Early Warning External Working Group, U. S. Geological Survey
- Current | Overseas Research Advisory Committee for Investigations into the Origin of the 2017 Pohang earthquake, Republic of Korea
- Current | Advisory Panel for Resilience to Natural Hazards, National Science Challenge New Zealand.
- 2020 | Organizing Committee International Symposium on the Pohang, Korea earthquake
- 2019 | Organizing Committee SPE/SEG Induced Seismicity Workshop
- 2019 | Organizing Committee Legacy Seismic Data Workshop
- 2019 | Peer Review Panel for the Texas Seismic Network (TexNet)
- 2019 | Chair Gutenberg Lecture Nomination Committee, AGU
- 2017-2018 | SSA Reid Medal Committee
- 2017 – 2018 | AGU Seismology Section Award Canvassing Committee
- 2017 | Editor, special section of The Leading Edge on Induced Seismicity
- 2015-2016 | Advisor to State Supervision of Mines, The Netherlands.
- 2014-2018 | Chair, Advisory Board, European Union Shale Gas Exploration and Exploitation Induced Risks
- 2014-2018 | Technical Advisory Group, Natural Hazards Platform, New Zealand
- 2014 | Chair, Drilling Safety Review Panel, Alpine Fault Drilling Project, New Zealand
- 2014 | Chair, Scientific Review Panel, Working Group on California Earthquake Probabilities.
- 2019 | Keynote Lecture, Microseismic Consortium of Calgary University and Alberta University, Banff, Alberta, Canada
- 2019 | Invited Lecture, Seoul National University, Republic of Korea
- 2019 | Invited Lecture, Utrecht University, The Netherlands
- 2019 | Keynote Lecture, 3rd Induced Seismicity Workshop, Davos, Switzerland.
- 2019 | Invited Lecture, University of Edinburgh
- 2018 | Gutenberg Memorial Lecture, American Geophysical Union, Washington, D.C.
- 2018 | Keynote Lecture, International Induced Seismicity Workshop, Banff, Alberta, Canada
- 2018 | Invited Lecture, Symposium Honoring Edi Kissling, Zurich, Switzerland
- 2018 | Invited Lecturer, International School of Physics “Enrico Fermi”, Varenna, Italy
- 2018 | Invited Lecture, European Seismological Commission meeting, Valetta, Malta

- 2018 | Invited Lecturer, Chinese University of Hong Kong
- 2017 | Invited Lecture, International Association of Seismology and Physics of the Earths Interior, Kobe, Japan
- 2017 | Invited Lecturer, Physics@Veldhoven, Netherlands
- 2017 | Invited Lecturer, Training School on Earthquakes, Cargèse, Corsica
- 2017 | Baldwin Memorial Lecture, Miami University, Miami, Ohio.
- 2017 | Keynote Lecture, 2nd Induced Seismicity Workshop, Davos, Switzerland.
- 2016 | Keynote Lecture, European Seismological Commission annual meeting, Trieste.
- 2016 | Keynote Speaker "Managing the hazard of induced seismicity in a changing world", American Rock Mechanics Association annual meeting, Houston.
- 2016 | Keynote Lecture, Society of Petroleum Engineers Induced Seismicty workshop, Fort Worth.
- 2016 | Invited Colloquium Lecture, Lamont-Doherty Earth Observatory.
- 2015 | Keynote Lecture, 50th Anniversary Symposium, Institute of Earth Science, Barcelona.
- 2015 | Invited Lecturer, Symposium honouring Raul Madariaga, Ecole Normale Superieure, Paris.
- 2015 | Keynote Lecture, 1st Induced Seismicity Workshop, Davos.
- 2015 | Invited Talk, Induced Seismicity Hazards and Processes, Joint Canadian Geophysical Union/American Geophysical Union meeting, Montreal.

Courses Taught

- 2020 (Winterl) | GEOPHYS 385Q Seismology Seminar
- 2020 (Winter) | GEOPHYS 385L Earthquake Seismology, Deformation, and Stress
- 2019 (Fall) | GEOPHYS 385Q Seismology Seminar
- 2019 (Fall) | GEOPHYS 385L Earthquake Seismology, Deformation, and Stress
- 2019 (Spring) | GEOPHYS 385Q Seismology Seminar
- 2019 (Winter) | GEOPHYS 385L Earthquake Seismology, Deformation, and Stress
- 2019 (Spring) | GEOPHYS 385L Earthquake Seismology, Deformation, and Stress
- 2018 (Fall) | GEOPHYS 130 Introduction to Seismology
- 2018 (Fall) | GEOPHYS 385L Earthquake Seismology, Deformation, and Stress
- 2017 (Fall) | GEOPHYS/EARTHSYS 110 Introduction to the Foundation of Contemporary Geophysics
- 2016 (Fall) | GEOPHYS 130 Introduction to Seismology

Publications since 2015 (Trainees in **Bold**)

- 2020 | **Wang, K.**, Ellsworth, W. L. and Beroza, G. C., Revisiting the Timpson Induced Earthquake Sequence: A System of Two Parallel Faults. *Geophysical Research Letters.*
- 2020 | **Schultz, R.**, Skoumal, R. J., Brudzinski, M . R., Eadon, D., Baptie, B. and Ellsworth, W. L., Hydraulic Fracturing Induced Seismicity. *Reviews of Geophysics.*
- 2020 | Mousavi, S. M., **Zhu, W.**, Ellsworth, W. L. and Beroza, G. C., Earthquake Transformer: An attentive deep-learning model for simultaneous earthquake detection and phase picking. *Nature Communications.*
- 2020 | **Schultz, R.**, Ellsworth, W. L., Beroza, G. C. and Baker, J. W., Risk-informed recommendations for managing hydraulic fracturing induced seismicity via traffic light protocols. *Bulleting of the Seismological Society of America.*
- Submitted | **Sheng, Y**., Ellsworth, W. L., Beroza, G. C. and **Lelloch, A**., Depth Constraints on Coseismic Velocity Changes from Frequency-Dependent Measurements of Repeating Earthquake Waveforms. *Geophysical Research Letters.*

- Submitted | Grigoli, F., Ellsworth, W. L., Zhang, M., Mousavi, S. M., Cesca, S., Satriano, C., Beroza, G. C. and Wiemer, S., Single station location of seismic clusters by solving a distance geometry problem. *Geophysical Journal International.*
- Submitted | **Lellouch, A.**, **Lindsey, N. J.**, Ellsworth, W. L. and Biondi, B., Comparison between Distributed Acoustic Sensing Geophyones – Downhole Microseismic Monitoring of the FORGE Geothermal Experiment. *Seismological Research Letters.*
- Submitted | **Lellouch, A.**, **Schultz, R.**, **Lindsey, N. J.**, Biondi, B. and Ellsworth, W. L., Low-magnitude seismicity with a downhole distributed acoustic sensing array – examples from the FORGE Geothermal Experiment. *Journal of Geophysical Research.*
- 2020 | **Park, Y.**, Mousavi, S. M., **Zhu, W.**, Ellsworth, W. L. and Beroza, G. C., Machine learning based analysis of the Guy-Greenbrier Arkansas earthquakes: a tale of two sequences. *Geophysical Research Letters.*
- 2020 | **Al-Ismail**, F., Ellsworth, W. L., Beroza, G. C., Empirical and synthetic approaches to calibration of the local magnitude scale, M_L. *Bulleting of the Seismological Society of America.*
- 2020 | **Langenbruch, C.**, Ellsworth, W. L., Woo, J.-U., Wald, D. J., Value at Induced Risk: Injection-induced seismic risk from low-probability, high impact events, *Geophysical Research Letters.*
- 2020 | Liu, M., **Zhang, M.**, Ellsworth, W. L., **Zhu, W.**, Ly, H. Rapid characterization of the July 2019 Ridgecrest, California earthquake sequence from raw seismic data using machine learning phase picker. *Geophysical Research Letters*.
- 2019 | Woo, J.-U., Kim. M, Sheen, D.-H., Kang T.-S., Rhie, J., **Grigoli, F.**, Ellsworth, W. L., Giardini, D. An in-depth seismological analysis revealing a causal link between the 2017 M_W 5.5 Pohang earthquake and EGS project, *Journal of Geophysical Research.*
- 2019 | Lee, K.-K., Ellsworth, W. L., Giardini, D., Ge, S., Shimamoto, T., Townend, J., Yeo, I.-Y., Kang, T.-S., Rhie, J., Sheen, D.-H., Chang, C., Woo, J.-U., **Langenbruch, C.** Beyond Pohang: Managing the Earthquake Risk of Underground Injections, *Science.*
- 2019 | Ellsworth, W. L., Giardini, D., Townend, J., Ge, S. and Shimamoto, T. Triggering of the Pohang, Korea, Earthquake (MW 5.5) by Enhanced Geothermal System Stimulation, *Seismological Research Letters.*
- 2019 | Ge, S., Giardini, D., Ellsworth, W. L., Shimamoto, T. and Townend, J. Overseas Research Advisory Committee Report on the Pohang Earthquake. *Summary Report of the Korean Government Commission on Relations between the 2017 Pohang Earthquake and EGS Project, The Geological Society of Korea.*
- 2019 | **Chu, S.**, Beroza, G. C., Ellsworth, W. L. Source Parameter Variability of Intermediate-Depth Earthquakes in Japanese Subduction Zones. *Journal of Geophysical Research*. 10.1029/2019JB01592.
- 2019 | **Yoon, C. E., Bergen**, K. J., Rong, K., Elezabi, H., Ellsworth, W. L., Beroza, G. C., Bailis P. and Levis, P. Unsupervised large-scale search for similar earthquake signals. *Bulletin of the Seismological Society of America*, 109, 1451-1468.
- 2019 | **Lellouch, A., Yuan, S.**, Ellsworth, W. L., Biondi, B., Velocity-based earthquake detection using downhole distributed acoustic sensing – examples from the San Andreas Fault Observatory at Depth. *Bulletin of the Seismological Society of America*, doi: 10.1785/0120190176.
- 2019 | **Lellouch, A., Yuan, S., Spica, Z.**, Biondo, B. and Ellsworth, W. L. Seismic velocity estimation using passive downhole distributed acoustic sensing records – examples from the San Andreas Fault Observatory at Depth, *Journal of Geophysical Research*, doi: 10.1029/2019JB017533.

- 2019 | **Zhang, M.**, Ellsworth, W. L., and Beroza, G. C., Rapid Earthquake Association and Location, *Seismological Research Letters,* V. 90, 2276-2284.
- 2019 | **Mosavi, S. M., Zhu**, **W**., Ellsworth, W. L. and Beroza, G. C., Unsupervised clustering of seismic signals using deep convolutional autoencoders. *IEEE Geoscience and Remote Sensing Letters*, doi: 10.1109/LGRS.2019.2909218.
- 2019 | **Yoshimitsu, N.**, Ellsworth, W. L., Beroza, G. C., Robust stress drop estimates of potentially induced earthquakes in Oklahoma: evaluation of empirical Green's function. *Journal of Geophysical Research*, doi: 10.1029/2019JB017483.
- 2019 | Ellsworth, W. L. From foreshocks to mainshocks: mechanisms and implications for earthquake nucleation and rupture propagation, *Proceedings of the International School of Physics "Enrico Fermi", Course 202*, 95-112, doi: 10.3254/978-1-61499-979-9-95.
- 2019 | **Yoon, C. E., Yoshimitsu, N.**, Ellsworth, W. L. and Beroza, G. C. Foreshocks and mainshock nucleation of the 1999 Mw 7.1 Hector Mine, California earthquake, *Journal of Geophysical Research*, 124, 1569-1582.
- 2018 | **Wang K.**, Ellsworth, W. L., Geroza, **G. C., Williams G., Zhang, M.**, Schroeder, D. and Rubinstein, J. 2019. Seismology with dark data: image-based processing of analog records using machine learning for the Rangely Earthquake Control Experiment. *Seismological Research Letters, V 90, 553-562.*
- 2018 | Ellsworth, W. L. and Bulut, F., Nucleation of the 1999 Izmit earthquake by a triggered cascade of foreshocks, *Nature Geoscience*, 11, 531-535.
- 2018 | Rubinstein, J. L., Ellsworth, W. L., and Dougherty, S. L. The 2013-2016 induced earthquakes in Harper and Sumner Counties, southern Kansas. *Bulletin of the Seismological Society of America*, V. 108, 674-689.
- 2018 | López-Comino, J.A., et al. Induced seismicity response of hydraulic fracturing: results of a multidisciplinary monitoring at the Wysin site, Poland, *Scientifc Reports*, 8, 8653, doi: 10.1038/s41598-018-26970-9.
- 2018 | **Schoenball, M., Walsh, R. F., Weingarten, M**. and Ellsworth, W.L., How faults wake up: the Guthrie-Langston, Oklahoma earthquakes, *The Leading Edge*, 37, 100-106.
- 2017 | **Schoenball, M.** and Ellsworth, W.L., A Systematic Assessment of the Spatiotemporal Evolution of Fault Activation Through Induced Seismicity in Oklahoma and Southern Kansas. *Journal of Geophysical Research: Solid Earth*, 122, 10189-10206.
- 2017 | **Yoon, C. E., Huang, Y.**, Ellsworth, W. L., and Beroza, G. C. Seismicity during the initial stages of the Guy-Greenbrier, Arkansas, earthquake sequence, *Journal of Geophysical Research*, 122, 9253-9274.
- 2017 | **Huang, Y**., Ellsworth, W. L., and Beroza, G. C., Stress drops of induced and tectonic earthquakes in the central United States are indistinguishable. *Science Advances*, *3*(8), e1700772.
- 2017 | **Schoenball, M.**, and Ellsworth, W. L., Waveform-Relocated Earthquake Catalog for Oklahoma and Southern Kansas Illuminates the Regional Fault Network. *Seismological Research Letters*, 88, 1252-1258.
- 2017 | **Gupta, A**., Baker, J. W., and Ellsworth, W. L., Assessing ground-motion amplitudes and attenuation for small-to-moderate induced and tectonic earthquakes in the central and eastern United States. *Seismological Research Letters*., 88, 1379-1389.
- 2017 | Savage, H.M., Kirkpatrick, J.D., Mori, J.J., Brodsky, E.E., Ellsworth, W.L., Carpenter, B.M., Chen, X., Cappa, F. and Kano, Y. Scientific Exploration of Induced SeisMicity and Stress (SEISMS), *Scientific Drilling*, 23, 57-63.
- 2017 | Pollitz, F.F., Wicks, C., **Schoenball, M**. and Ellsworth, W. L., Geodetic slip model of the M 5.8 3 September, 2016 Pawnee, Oklahoma earthquake: Evidence for fault zone collapse, *Seismological Research Letters*, 88, 983-993.

- 2017 | Moyer, P.A., Boettcher, M.S. and Ellsworth, W.L., Call for Models – A Test Case for the Source Inversion Validation: The 2014 ML 5.5 Orkney, South Africa Earthquake, *Seismological Research Letters*, 88, 1333-1338.
- 2016 | Shelly, D. R., Ellsworth, W. L., and Hill, D. P., Fluid-faulting evolution in high definition: connecting fault structure and frequency-magnitude variations during the 2014 Long Valley Caldera, California earthquake swarm. *Journal of Geophysical Research: Solid Earth*, 121, 1776-1795.
- 2016 | Shelly, D. R., Hardebeck, J. L., Ellsworth, W. L., and Hill, D. P., A new strategy for earthquake focal mechanisms using waveform-correlation-derived relative polarities and cluster analysis: Application to the 2014 Long Valley Caldera earthquake swarm. *Journal of Geophysical Research: Solid Earth*, 121, 8622-8641.
- 2016 | Douilly, R., Ellsworth, W.L., Kissling, E., Freed, A.M., Deschamps, A. and Mercier de Lépinay, B. 3-D velocity structure in southern Haiti from local earthquake tomography. *Journal of Geophysical Research: Solid Earth*, 121, 8813-8832.
- 2016 | Shirzaei, M., Ellsworth, W. L., Tiampo, F., González, P. J. and Manga, M. Surface uplift and time-dependent seismic hazard due to fluid injection in eastern Texas. *Science*, 353, doi: 10.1126/science.aag0262.
- 2016 | **Huang, Y**., Beroza, G. C., and Ellsworth, W. L., Stress drop estimates of potentially induced earthquakes in the Guy-Greenbrier sequence. *Journal of Geophysical Research: Solid Earth*, *121*(9), 6597-6607.
- 2016 | Petersen, M. D., Mueller, C. S., Moschetti, M. P., Hoover, S. M., Llenos, A. L., Ellsworth, W. L., and Rukstales, K. S. Seismic-Hazard Forecast for 2016 Including Induced and Natural Earthquakes in the Central and Eastern United States. *Seismological Research Letters*, *87*(6), 1327-1341.
- 2016 | Noda, S. and Ellsworth, W.L. Scaling relation between earthquake magnitude and the departure time from P wave similar growth. *Geophysical Research Letters*, *43*(17), 9053-9060.
- 2015 | Hornbach, M. J., DeShon, H. R., Ellsworth, W. L., Stump, B. W., Hayward, C., Frohlich, C., ... and Luetgert, J. Causal factors for seismicity near Azle, Texas. *Nature communications*, *6*, 6728
- 2015 | McGarr, A., Bekins, B., Burkardt, N. Dewey, J., Earle, P., Ellsworth, W., Ge, S., Hickman, S., Holland, A., Majer, E., Rubinstein, J., and Sheehan, A. Coping with the Hazardous Effects of Earthquakes Induced by Fluid Injection, Science, v. 347, p. 830-831.
- 2015 | Ellsworth, W. L., Llenos, A. L., McGarr, A. F., Michael, A. J., Rubinstein, J. L., Mueller, C. S., Petersen, M. D., and Calais, E. Increasing Seismicity in the U. S. Midcontinent: Implications for Earthquake Hazard, The Leading Edge, doi: 10.1190/tle34060618.1.
- 2015 | Kaven, J. O., Hickman, S. H., McGarr, A. F., and Ellsworth, W. L. Surface Monitoring of Microseismicity at the Decatur, Illinois, CO2 Sequestration Demonstration Site, Seismological Research Letters, 86, doi: 10.1785/0220150062.
- 2015 | Peng, Z., Shelly, D. and Ellsworth, W. L. Delayed Dynamic Triggering of Deep tremor along the Parkfield-Cholame Section of the San Andreas Fault Following the 2014 M6.0 South Napa earthquake, Geophysical Research Letters, 42, 7916-7922.
- 2015 | Noda, S., Yamamoto, S., and Ellsworth, W. L. Rapid Estimation of Earthquake Magnitude from the Arrival Time of the Peak High-Frequency Amplitude, Bull. Seismol. Soc. Am., 106, p 232-241.

Publications prior to 2015 in chronological order

1973 Wesson, R. L., Burford, R. O., and Ellsworth, W. L., Relationship between seismicity, fault creep, and crustal loading along the central San Andreas fault, in Conference on tectonic problems of the San Andreas fault system, Stanford, Calif., l973, Proceedings, Stanford Univ. Pubs. Geol. Sci. v. l3, p. 303-32l.

1973 Wesson, R. L., and Ellsworth, W. L., Seismicity preceding moderate earthquakes in California: Journal of Geophysical Research, v. 78, no. 35, p. 8527-8545.

1973 Ellsworth, W. L., Campbell, R. H., Hill, D. P., Page, R. A., Alewine, R. W., III, Hanks, T. C., Heaton, T. H., Hileman, J. A., Kanamori, Hiroo, Minster, B., and Whitcomb, J. H., Point Mugu, California, earthquake of 2l February, l973 and its aftershocks: Science, v. l82, p. 1127-1129.

1974 Robinson, Russell, Wesson, R. L., and Ellsworth, W. L., Variation of P-wave velocity before the Bear Valley, California, earthquake of 24 February l972: Science, v. l84, p. 1281-l283.

1975 Ellsworth, W. L., Bear Valley, California, earthquake sequence of February-March, l972: Seismological Society of America Bulletin, v. 65, no. 2, p. 483-506.

1976 Stierman, D. J., and Ellsworth, W. L., Aftershocks of the February 2l, l973 Point Mugu, California earthquake: Seismological Society of America Bulletin, v. 66, no. 6, p. 1931-l952.

1977 Ellsworth, W. L., and Koyanagi, R. Y., Three-dimensional crust and mantle structure of Kilauea volcano, Hawaii: Journal of Geophysical Research, v. 82, no. 33, p. 5379-5394.

1977 Wesson, R. L., Robinson, R., Bufe, C. G., Ellsworth W.L., Pfluke, J. H., Steppe, J. A., and Seekins, L. C., Search for seismic forerunners to earthquakes in central California: Tectonophysics, v. 42, p. 111-126.

1980 Reasenberg, P. A., Ellsworth, W. L., and Walter, A. W., Teleseismic evidence for a low velocity body under the Coso geothermal area: Journal of Geophysical Research, v. 85, no. B5, p. 247l-2483.

1980 Thurber, C. H., and Ellsworth, W. L., Rapid solution of ray tracing problems in heterogeneous media: Seismological Society of America Bulletin, v. 70, no. 4, p. 1137-1148.

1981 Ellsworth, W. L., Lindh, A. G., Prescott, W. H., and Herd, D. G., The l906 San Francisco earthquake and the seismic cycle: Earthquake Prediction - An International Review, Maurice Ewing Series 4, ed. by Simpson, D.W., and Richards P.G., :American Geophysical Union, Washington, D.C., p. 126-140.

1982 Reasenberg, P., and Ellsworth, W.L., Aftershocks of The Coyote Lake, California Earthquake of August 6, 1979: A Detailed Study: Journal of Geophysical Research, 87, B13, 10637-10655.

1982 Ellsworth, W.L., Olson, J.A., Shijo, L.N., and Marks, S.M., Seismicity and Active faults in the Eastern San Francisco Bay Region: Proceedings of conference on earthquake hazards in the Eastern San Francisco Bay Area, California Division of Mines and Geology, Special Publication 62, p. 83-91.

1983 Yerkes, R. F., Ellsworth, W. L., and Tinsley, J. C., Triggered reverse faulting and earthquake due to crustal unloading, northwest Transverse Ranges, Calif.: Geology, v. 11, p. 287-291.

1984 Poupinet, G., Ellsworth, W. L., and Frechet, J., Monitoring velocity variations in the crust using earthquake doublets: an application to the Calaveras fault, California: Journal of Geophysical Research, v. 89, p. 5719-5731.

1984 Bakun, W. H., M. M. Clark, R. S. Cockerham, W. L. Ellsworth, A. G. Lindh, W. H. Prescott, A. F. Shakal, and P. Spudich, The 1984 Morgan Hill, California, Earthquake: Science, v. 225, p. 288-291.

1985 Rundle, J.B., G.J. Ebring, R.P. Striker, J.T. Finger, C.C. Carson, M.C. Walck, W.L. Ellsworth, D.P. Hill, P. Malin, E. Tono, M. Robertson, S. Kuhlman, T. McEvilly, R.

Clymer, S.B. Smithson, S. Deemer, R. Johnson, T. Henyey, E. Hauksson, P. Leary, J. McRaney, and E. Kissling, Seismic imaging in Long Valley, California by surface and borehole techniques: an investigation of active tectonics: EOS, American Geophysical Union Transactions, v. 66, p.194-201.

1986 Bakun, W. H., J. Bredehoeft, R. O. Burford, W. L. Ellsworth, M. S. J. Johnston, L. Jones, A. G. Lindh, C. Mortensen, E. Roeloffs, S. Schulz, P. Segall, and W. Thatcher, Parkfield earthquake prediction scenarios and response plans: U.S. Geological Survey Open-File Report 86-365, 46p.

1987 Sanders, C. O., P. B. Dawson, W. L. Ellsworth, J. R. Evans, D. P. Hill, and H. M. Iyer, The Seismological search for magma: Geothermal Resource Council, Transactions, v. 11, p. 385-390.- (Dir. Appr. 6/10/87).

1988 Working Group on California Earthquake Probabilities, Probabilities of large earthquake occurring in California on the San Andreas fault: U.S. Geological Survey Open-File Report 88-398, 62 p.

1989 Dewey, J. W., D. P. Hill, W. L. Ellsworth, and E. R. Engdahl, Earthquake, faults and the seismotectonic framework of the continuous United States: in Geophysical Framework of the Continental United States, eds., L. C. Pakiser and W. D. Mooney, Geological Society of America, Memoir 172, p. 541-575.

1989 Heaton, T., D. Anderson, W. Arabrasz, R. Buland, W. Ellsworth, S. Hartzell, T. Lay, and P. Spudich, National Seismic System Science Plan: U.S. Geological Survey Circular 1031, 42 p.

1990 U.S. Geological Survey Staff (corresponding author), The Loma Prieta, California, earthquake: an anticipated event: Science, v. 247, p. 286-293.

1990 Ellsworth, W. L., Chapter 6, Earthquake history, 1769-1989: in R. E. Wallace, ed., The San Andreas Fault System, California, U. S. Geological Survey Professional Paper 1515, p. 152-187.

1990 Dietz, L. D., and Ellsworth, W. L., The October 17, 1989 Loma Prieta, California earthquake and its aftershocks: geometry of the sequence from high-resolution locations: Geophysical Research Letters, v. 17, p. 1417-1420.

1990 Michael, A. J., Oppenheimer, D. H., and Ellsworth, W. L., Coseismic stress changes induced by the 1989 Loma Prieta, California earthquake: Geophysical Research Letters, v. 17, p. 1441-1444.

1990 Working Group on California Earthquake Probabilities, Probabilities of large earthquakes in the San Francisco Bay Region, California: U.S. Geological Survey Circular 1053, 51p.

1990 Ellsworth, W. L., and Dietz, L. D., Crustal stress and seismic strain release in the 1989 Loma Prieta, California earthquake: Proceedings Seventh Joint Meeting of the U.S. - Japan Conference on Natural Resources (UJNR) Panel on Earthquake Prediction Technology, Tsukuba Japan, November 14-15, 1990, p. 67-82.

1991 Hill, D. P., J. P. Eaton, W. L. Ellsworth, R. S. Cockerham and F. W. Lester, The seismotectonic fabric of central California: in Neotectonics of North America, Geological Society of America DNAG Associated Volume GSMV-1, p. 107-132.

1991 Ellsworth, W.L., Comments on temporal variations of direct and coda waves as reliable predictors of future earthquakes: in Evaluation of proposed earthquake precursors, IASPEI Sub-Commission on Earthquake Prediction, Wyss, M., Chairman, 3 p.

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